NOAA, NATIONAL WEATHER SERVICE, WEATHER FORECAST OFFICE

Miami, Florida 33165

http://weather.gov/southflorida

Dry Conditions Continued in November

December 1, 2010: November 2010 continued the streak of drier than normal rainfall across south Florida as the region was dominated by dry high pressure at the surface and aloft. The result of these dry conditions is the southward expansion of drought conditions over the southern Florida peninsula. Areas generally north of a Naples to Jupiter line, including the northern Everglades and the Lake Okeechobee region, are in a moderate drought (D1) status, with most of Glades County in severe drought (D2) status.

Rainfall totals were higher along the east coast than over interior and western areas. This is typical for November as easterly winds caused by high pressure areas over the continental United States bring additional moisture to coastal locations, with the air mass drying as it moves across the peninsular land areas. Most of the rainfall area-wide occurred in advance of a strong cold front which moved across the region in the first few days of the month.

Below are November rainfall totals and departure from normal in inches for select south Florida locations, as well as historical rank:

Location	November 2010 Rainfall	November Departure From Normal and Rank
Miami Int'l	2.35	-1.08
Fort Lauderdale Int'l	0.96	-3.61 (13th driest)
Palm Beach Int'l	1.38	-4.17
Naples Regional	0.59	-1.40 (18th driest)
Miami Beach	1.82	-1.50
Moore Haven	1.22	-0.69
Fort Lauderdale Beach	4.80	
North Miami Beach	4.01	
Hollywood	2.67	
Homestead General	2.54	
Juno Beach	2.37	

NWS Miami (FIU Main)	1.99	
Immokalee	1.71	
LaBelle	1.71	
Palm Beach Gardens	1.30	
Marco Island	0.90	
Oasis Ranger Station	0.88	
Canal Point (Palm Beach)	0.65	

Temperatures

November was a month of two well-defined temperature patterns across south Florida. The first half of the month was dominated by a trough in the mid levels of the atmosphere over the southeast United States (Figure 1), which enabled modified continental air masses to affect Florida and resulted in cooler than normal conditions. The atmospheric pattern over North America underwent a significant shift during the second half of the month, as the mid level trough shifted to the western United States and northern Plains and the southeast United States was under greater influence from the subtropical high extending from the Atlantic Ocean (Figure 2). This shift resulted in few frontal passages and warmer than normal temperatures which characterized the second half of November.

This shift in patterns and temperatures is reflected in the observed November temperature plot for Miami International Airport (Figure 3). The end result of these different patterns was November 2010 temperatures being within about a degree of normal.

Following are the average November 2010 temperatures and departure from normal for the 4 sites:

- **Miami International Airport** had an average November temperature of 73.8 degrees Fahrenheit. This is 0.6 degrees below the normal for November,

- **Palm Beach International Airport** had an average November temperature of 73.1 degrees Fahrenheit. This is exactly the normal for November

- **Fort Lauderdale/Hollywood International Airport** had an average November temperature of 73.0 degrees Fahrenheit. This is 1.1 degrees below the normal for November,

- **Naples Municipal Airport** had an average November temperature of 72.2 degrees Fahrenheit. This is 0.2 degrees above the normal for November

Outlook for December

The Climate Prediction Center's outlook for December calls for the drier than normal conditions to continue across South Florida, typical of moderate to strong winter La Nina conditions. This will probably result in further expansion and worsening of drought conditions to include of all peninsular South Florida. Monitor the NWS Miami Drought Page for continuous updates on precipitation and drought conditions across the area.

Temperatures may exhibit similar tendencies to what was observed in November, with cooler than normal temperatures returning to South Florida during the early part of the month, followed by possible modification to near normal values for mid and late December. Therefore, equal chances of below, near and above normal temperatures are forecast for December.

For the latest weather conditions, forecasts, warnings, advisories and statements, please visit the National Weather Service Miami-South Florida Forecast Office's web site at http://www.weather.gov/southflorida.

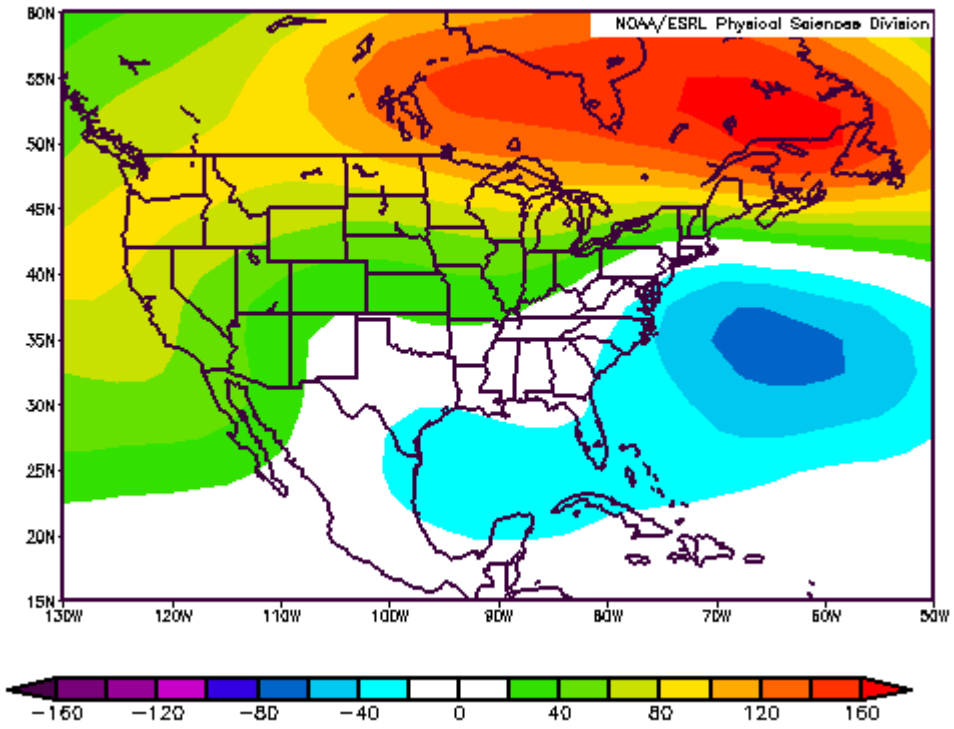

Figure 1: 500 MB Height Anomalies: Nov 1 – Nov 15, 2010. Light Blue colors over southeast U.S. and surrounding waters indicate persistent mid level trough.

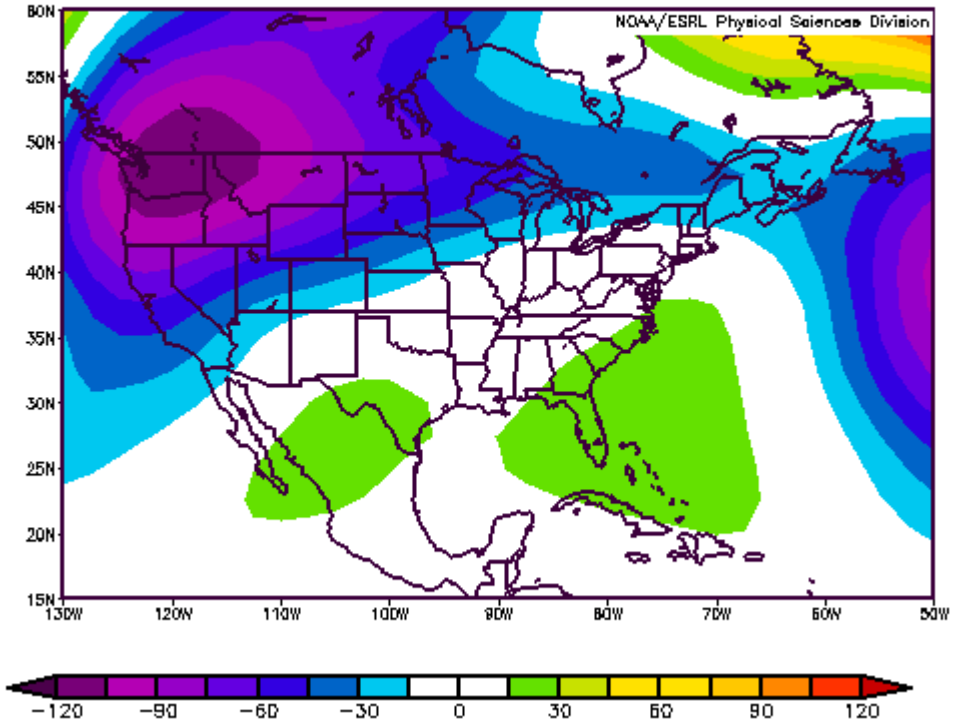

Figure 2: 500 MB Height Anomalies: Nov 16 – Nov 27, 2010. Green color over Southeast U.S. coastline indicates subtropical high pressure influence over Gulf of Mexico and western Atlantic Ocean.

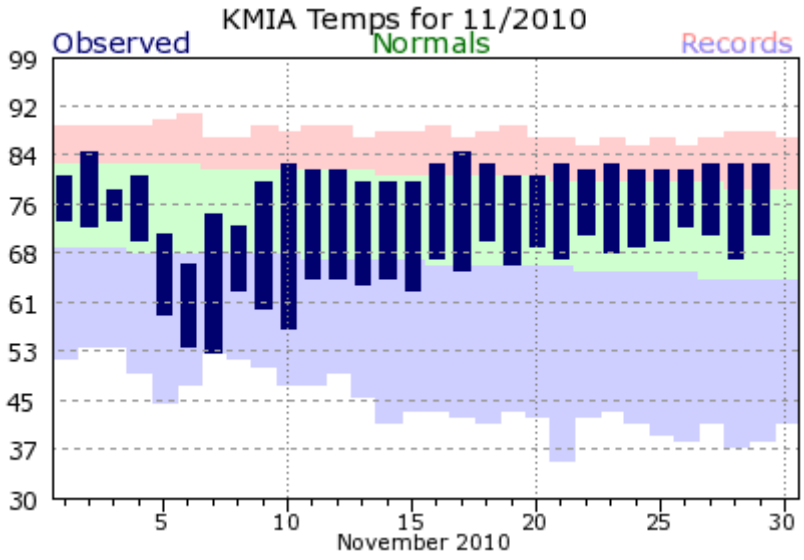

Figure 3: November Temperature Plot at Miami International Airport (KMIA). Upper and lower extent of blue bars indicates temperature range for each date, compared to normal and record values.